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Date of Application, 19th Nov., 1889
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PROVISIONAL SPECIFICATION.

Improvements in Disinfectants and Deodorizers.

I, Joseph Price, of 58 Lombard Street, in the City of London Accountant, do hereby declare the nature of this invention to be as follows :—

The main object of my invention is the preparation of a compound or admixture of certain chemical substances for disinfecting, deodorizing, and purifying infectious, offensive and noxious gases and foul or decaying vegetable or animal matters, such compound being not only efficacious and portable but more useful and economical than any preparation for similar purposes in ordinary use.

It is well known that oxygen and chlorine are the most powerful disinfectants yet discovered, and that their combination with any substance in a portable or convenient state for dealing with offensive effluvia, or decomposing and putrescent matters is an object worthy of attainment, as such a compound would do double duty by readily attacking impurities contaminating the atmosphere or escaping from aqueous bodies, as well as arresting the decomposition of, and purifying the offensive animal and vegetable matters therein contained.

The methods which have been proposed for accomplishing these desiderata have always had some disadvantage, the materials employed to hold the two gases, oxygen and chlorine, in combination, were either too expensive or unsuitable for commercial purposes.

The materials I prefer to employ are manganate of soda and chloride of lime, but I may use other compounds containing oxygen and chloride, and I mix or blend these with a, comparatively speaking, waste chemical product, known as "Salt Cake" (sulphate of soda) the residuum from the chemicals used in the manufacture of muriatic, nitrous, or nitric acids, which is in itself a highly antiseptic salt.

This combination has many advantages over other disinfectants, which usually contain only one of the two principal elements in question, and are often mixed with lime, chalk, terra alba, sawdust, or other indissoluble matters, which choke up the drains and sewers. I prepare my compound in a perfectly free and dry state, in which condition it may be used and when exposed in shallow or other vessels it emits chlorine in a steady continuous and effective manner for a week or ten days, without appreciably deliquescing, destroying all noxious and offensive smells within a wide radius, and it is, after the exposure, almost as efficacious (having acquired additional oxygen whilst emitting the chlorine) for treating foul water and putting down sinks, drains, water closets &c., as when used direct for such purposes.

Another very important feature in my preparation consists in its solubility in water and it therefore will not choke up or clog the drain pipes, or sewers, and consequently it is especially adapted for household purposes, barracks, hospitals, workhouses, stables, or other buildings draining into the common sewers, where it would finish its work by destroying the foul gases and purifying the fluid matters.

From experience, I find that the most suitable proportions of the ingredients which I combine for the purposes enumerated, having all ends in view, are as follows :—

1 part manganate of soda,
$1\frac{1}{2}$ parts chloride of lime,
$17\frac{1}{2}$ „ salt cake (sulphate of soda),

but I may vary or determine the proportions under special circumstances and conditions, which might present themselves in practice.

As the salt cake contains a small portion of free hydrchloric or nitric acid, it is a most valuable adjunct to the other purifying agents, which combined, would serve to prepare sewage matters for treatment at the outfall, the ammoniacal and nitrogenous properties being fixed ready for precipitation—hence it would greatly enhance the value of the deposit by rendering it a highly fertilising commodity for agricultural purposes.

I purpose calling my new compound "Sal-Ozone" and to use it for disinfecting, deodorising, and neutralising, noxious, and offensive, effluvia, and decomposing or putrescent animal or vegetable matters. It is found to be effective, innocuous, portable, and economical, and can be used in a dry or liquid state, and being soluble, is eminently suited for putting down sinks, drains, or sewers, to neutralize sewer gases and arrest decomposition in the sewerage matters.

It does not destroy but adds to the valuable fertilising properties contained therein, and such sewerage matters can after treatment with my preparation be therefore profitably utilised for agricultural purposes.

Dated this 19th day of November 1889.

AMBROSE MYALL,
21, Cockspur Street, S.W., Agent for the Applicant.

COMPLETE SPECIFICATION.

Improvements in Disinfectants and Deodorizers.

I, Joseph Price, of 58 Lombard Street, in the City of London, Accountant, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The main object of my invention is the preparation of a compound or admixture of certain chemical substances for disinfecting, deodorising, and purifying infectious, offensive and noxious gases, and foul or decaying vegetable or animal matters, such compound being not only efficacious and portable but more useful and economical than any preparation for similar purposes in ordinary use.

It is well known that oxygen and chlorine are the most powerful disinfectants yet discovered, and that their combination with any substance in a portable or convenient state for dealing with offensive effluvia or decomposing and putrescent matters, is an object worthy of attainment, as such a compound would do double duty, by readily attacking impurities contaminating the atmosphere, or escaping from aqueous bodies, as well as arresting the decomposition of and purifying the offensive animal and vegetable matters therein contained.

The methods which have been proposed for accomplishing these desiderata have always had some disadvantage, the materials employed to hold the two gases, oxygen and chlorine, in combination, were either too expensive or unsuitable for commercial purposes.

The materials I prefer to employ, are manganate of soda and chloride of lime, but I may use other compounds containing oxygen and chlorine, and I mix or blend these with a comparatively speaking waste chemical product known as "Salt Cake" (sulphate of soda) the residuum from the chemicals used in the manufacture of muriatic, nitrous, or nitric acids, which is in itself a highly antiseptic salt.

This combination has many advantages over other disinfectants, which usually contain only one of the two principal elements in question, and are often mixed with lime, chalk, terra-alba, sawdust, or other indissoluble matters, which choke up the drains and sewers. I prepare my compound in a perfectly dry and free state in which condition it may be used and when exposed in shallow or other vessels, it emits chlorine in a steady, continuous and effective manner for a week or ten days without appreciably deliquescing, destroying all noxious and offensive smells within a wide radius, and it is after this exposure almost as efficacious (having acquired additional oxygen whilst emitting the chlorine) for treating foul water, and putting down sinks, drains, water closets, &c., as when used direct for such purpose.

Another very important feature in my preparation consists in its solubility in water, and it therefore will not choke up or clog the drain pipes or sewers, and consequently is specially adapted for household purposes, barracks, hospitals, workhouses, stables, or other buildings, draining into the common sewers, where it would complete its work by destroying the foul gases and purifying the fluid matters.

From experience I find that the most suitable proportions of the ingredients which I combine for the purposes enumerated, having all ends in view, are as follows :—

1 part manganate of soda,
1½ parts chloride of lime,
17½ parts salt cake (sulphate of soda),

but I may vary or determine the proportions under special circumstances and conditions which might present themselves in practice.

As the salt cake contains a small portion of free hydrochloric or nitric acid, it is a most valuable adjunct to the other purifying agents, which combined would serve to prepare sewage matters for treatment at the outfall, the ammoniacal and nitrogenous properties being fixed ready for precipitation—hence it would greatly enhance the value of the deposit by rendering it a highly fertilising commodity for agricultural purposes.

I propose calling my new compound "Sal-Ozone," and to use it for disinfecting, deodorising, and neutralising noxious and offensive effluvia and decomposing or putrescent animal or vegetable matters. It is found to be effective, innocuous, portable and economical, and can be used in a dry or liquid state, and being soluble is eminently suited for putting down sinks, drains, or sewers, to neutralise sewer gases, and arrest decomposition in the sewerage matters. It does not destroy but adds to the valuable fertilising properties contained therein, and such sewerage matters can after treatment with my preparation be therefore profitably utilised for agricultural purposes.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is :—

1. A disinfectant and deodorizer, composed of a mixture or combination of salt cake (sulphate of soda) with suitable proportions of manganate of soda and chloride of lime, for the purposes as herein set forth.

2. A disinfectant and deodorizer, composed of a mixture or combination of salt cake (sulphate of soda) with suitable compounds or substances containing oxygen and chlorine, for the purposes as herein set forth.

Dated this 19th day of September 1890.

AMBROSE MYALL,
21, Cockspur Street, S.W., Agent for the Applicant.

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